

Homework 2

- Finish the Labs from class if not finished
- Read Chapter 2.1 – 2.3
- Problems below: (if turning in written output, make sure it's clear, organized and easy to read)
- Watch youtube video: <https://www.youtube.com/watch?v=rjkYAs6gAkk>

1. Trace the evaluation of the following expressions, and give their resulting values:

Show your work.

- a. $2 + 3 * 4 - 6$
- b. $14 / 7 * 2 + 30 / 5 + 1$
- c. $(12 + 3) / 4 * 2$
- d. $(238 \% 10 + 3) \% 7$
- e. $(18 - 7) * (43 \% 10)$
- f. $2 + 19 \% 5 - (11 * (5 / 2))$
- g. $813 \% 100 / 3 + 2.4$
- h. $26 \% 10 \% 4 * 3$
- i. $22 + 4 * 2$
- j. $23 \% 8 \% 3$
- k. $12 - 2 - 3$
- l. $6/2 + 7/3$
- m. $6 * 7 \% 4$
- n. $3 * 4 + 2 * 3$
- o. $177 \% 100 \% 10 / 2$
- p. $89 \% (5 + 5) \% 5$
- q. $392 / 10 \% 10 / 2$
- r. $8 * 2 - 7 / 4$
- s. $37 \% 20 \% 3 * 4$
- t. $17 \% 10 / 4$

2. Trace the evaluation of the following expressions, and give their resulting values:

Show your work.

- a. $2 + 2 + 3 + 4$
- b. $"2 + 2" + 3 + 4$
- c. $2 + "2 + 3" + 4$
- d. $3 + 4 + "2 + 2"$
- e. $"2 + 2" + (3 + 4)$
- f. $“(2 + 2)” + (3 + 4)$
- g. $"hello 34" + 2 * 4$
- h. $2 + "(int) 2.0" + 2 * 2 + 2$
- i. $4 + 1 + 9 + "." + (-3 + 10) + 11 / 3$

- j. $8 + 6 * -2 + 4 + "0" + (2 + 5)$
- k. $1 + 1 + "8 - 2" + (8 - 2) + 1 + 1$
- l. $5 + 2 + "(1 + 1)" + 4 + 2 * 3$
- m. $"1" + 2 + 3 + "4" + 5 * 6 + "7" + (8 + 9)$

3. Imagine you are writing a program that stores a student's year (Freshman, Sophomore, Junior, or Senior), the number of courses the student is taking, and his or her GPA on a 4.0 scale. Declare variables with the appropriate names and types to hold this information.

4. Suppose you have an int variable called number. What Java expression produces the second-to-last digit of the number (the 10s place)? What expression produces the third-to-last digit of the number (the 100s place)?

5. What is the output from the following code?

```
int max;  
int min = 10;  
max = 17 - 4 / 10;  
max = max + 6;  
min = max - min;  
System.out.println(max * 2);  
System.out.println(max + min);  
System.out.println(max);  
System.out.println(min);
```